

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :

Hideo ANDO et al. : ATTN: APPLICATION DIVISION

SERIAL NO: New Divisional Application :

FILED: Herewith : EXAMINER: Unassigned

FOR: INFORMATION RECORDING METHOD AND INFORMATION REPRODUCING
METHOD

PRELIMINARY AMENDMENT

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

Preliminary to the examination of the above-referenced application, please amend the application as follows:

Please cancel claims 1-24 without prejudice.

Please add claims 25-30 as shown below.

25. (New) An information recording method of recording data on an information recording medium having a data recording portion and a management information recording portion in which main and back-up management files are to be located, the information recording method comprising the steps of:

recording a video file or an audio file in the data recording portion, the video file including video data, the audio file including audio data, the video data or the audio data comprising at least one program and object units;

recording original program chain information in the main and back-up management files, the original program chain information designating a reproduction order of cells

representing the video data in the video file or the audio data in the audio file;

recording new chain information as user-defined program chain information in the main and back-up management files, the new chain information designating a reproduction order of the cells, which is different from a fixed reproduction order designated by the original program chain information; and

recording cell information representing the cells, which is designated by the original program chain information or user-defined program chain information, in the main and back-up management files,

wherein the main management file and the back-up management file are updated by editing user-defined program chain information of the main management file and that of the back-up management file, and a reproduction order indicated by the original program chain information is maintained even when the user-defined program chain information is edited.

26. (New) An information recording method according to claim 25, further comprising a step of recording cell type information distinguishing a movie cell type and a still picture cell type from each other, in an area in the cell information,

wherein the cell information further includes information indicating presentation start time of the cell (C_V_S_PTM) and presentation end time of the cell (C_V_E_PTM), where the C_V_S_PTM and the C_V_E_PTM satisfy the following conditions:

(1) in a cell in the original program chain, the C_V_S_PTM is required to fall into first four object units of the corresponding video object, and the C_V_E_PTM is required to fall into the last four object units of the corresponding video object; and

(2) in a cell in an user-defined program chain, the following relationship is required to be satisfied:

$$O_C_V_S_PTM \leq C_V_S_PTM < C_V_E_PTM \leq O_C_V_E_PTM$$

where O_C_V_S_PTM and O_C_V_E_PTM are presentation start time and end time of the original cell which corresponds to the object referred to by the cell in the user-defined program chain.

27. (New) An information recording apparatus for recording information on a recording medium, the information recording apparatus comprising:

video or audio file recording means for recording a video file or an audio file in a data recording portion, the video file including video data, the audio file including audio data, the video data or the audio data comprising at least one program and object units;

original program chain recording means for recording original program chain information in main and back-up management files in a management information recording portion, the original program chain information designating a reproduction order of cells representing the video data in the video file or the audio data in the audio file;

new chain information recording means for recording new chain information as user-defined program chain information in the main and back-up management files, the new chain information designating a reproduction order of the cells, which is different from a fixed reproduction order designated by the original program chain information; and

cell information recording means for recording cell information representing the cells, which is designated by the original program chain information or user-defined program chain information, in the main and back-up management files,

wherein the main management file and the back-up management file are updated by editing the user-defined program chain information of the main management file and that of the back-up management file, and a reproduction order indicated by the original program chain information is maintained even when the user-defined program chain information is edited.

28. (New) An information recording apparatus according to claim 27, further comprising cell type information recording means for recording cell type information distinguishing a movie cell type and a still picture cell type from each other, in an area in the cell information,

wherein the cell information further includes information indicating presentation start time of the cell (C_V_S_PTM) and presentation end time of the cell (C_V_E_PTM), where the C_V_S_PTM and the C_V_E_PTM satisfy the following conditions:

(1) in a cell in the original program chain, the C_V_S_PTM is required to fall into the first four object units of the corresponding video object, and the C_V_E_PTM is required to fall into the last four object units of the corresponding video object; and

(2) in a cell in an user-defined program chain, the following relationship is required to be satisfied:

$$O_C_V_S_PTM \leq C_V_S_PTM < C_V_E_PTM \leq O_C_V_E_PTM$$

where O_C_V_S_PTM and O_C_V_E_PTM are presentation start time and end time of the original cell which corresponds to the object referred to by the cell in the user-defined program chain.

29. (New) An information recording/reproducing medium in which files are recorded, comprising:

a video file including video data or an audio file including audio data, the video data or the audio data comprising at least one program and object units;

a main management file including video or audio management information for use in managing the video data in the video file or the audio data in the audio file;

original program chain information recorded in main and back-up management files in a management information recording portion, the original program chain information

designating a reproduction order of cells representing the video data in the video file or the audio data in the audio file;

new chain information as user-defined program chain information recorded in the main and back-up management files, the new chain information designating a reproduction order of the cells, which is different from a fixed reproduction order designated by the original program chain information; and

cell information recorded in the main management file, the cell information representing the cells, which is designated by the original program chain information or user-defined program chain information, in the main and back-up management files,

wherein the main management file and the back-up management file are updated by editing the user-defined program chain information of the main management file and the back-up management file, and a reproduction order indicated by the original program chain information is maintained even when the user-defined program chain information is edited.

30. (New) An information recording/reproducing medium according to claim 29, further comprising cell type information distinguishing a movie cell type and a still picture cell type from each other, in an area in the cell information,

wherein the cell information further includes information indicating presentation start time of the cell (C_V_S_PTM) and presentation end time of the cell (C_V_E_PTM), where the C_V_S_PTM and the C_V_E_PTM satisfy the following conditions:

- (1) in a cell in the original program chain, the C_V_S_PTM is required to fall into the first four object units of the corresponding video object, and the C_V_E_PTM is required to fall into the last four object units of the corresponding video object; and
- (2) in a cell in an user-defined program chain, the following relationship is required to be satisfied:

$O_C_V_S_PTM \leq C_V_S_PTM < C_V_E_PTM \leq O_C_V_E_PTM$

where $O_C_V_S_PTM$ and $O_C_V_E_PTM$ are presentation start time and end time of the original cell which corresponds to the object referred to by the cell in the user-defined program chain.

REMARKS

Favorable consideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 25-30 are presently active in this case, original claims 1-24 having been canceled by way of the present amendment.

Accordingly, examination on the merits of claims 25-30 are believed to be in order, and an early and favorable action is respectfully requested.

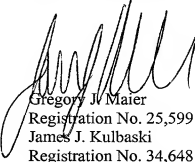
Respectfully submitted,

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